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## Forestry Canada - Maritimes Region

# TECHNICAL NOTE

### PLANTING AND TENDING RECOMMENDATIONS FOR WHITE ASH
### (Fraxinus americana L.)

WHERE TO PLANT: For best growth, plant in deep, moist, well-drained to imperfectly drained loams, clay loams, or silty loams. Nitrogen is essential for good ash growth and high calcium content is preferable. Ash will also grow on sandier loams if there is sufficient moisture, and it tolerates temporary flooding.

WHERE NOT TO PLANT: In infertile, eroded, shallow soils; on dry exposed ridges, any soil less than 30 cm (12 in) deep, or in swamps. In uncultivated woodland cutovers.

SITE PREPARATION: In late August, before spring planting, spray 4.7 L/ha (0.5 gal/ac) of Vision (Roundup) over the whole area, or in strips and spots where intervening species already present are acceptable. Two weeks after spraying, plow and disk or rototill. Lower application rates may be effective on lesser competition ,and thus less expensive.

SPECIES MIXTURES: On intensively managed, highly productive sites, it is best to plant only the most valuable species for quality timber. The plantation is comparable to a fruit orchard. On other sites, a mixture of species such as red and sugar maple, white and yellow birch, and red oak may maximize soil productivity. Mixtures also fulfill the shelter requirements of white ash in the establishment phase of its growth. Red maple is best on wetter sites, oak and birch on drier areas.

Ash should not be grown in mixture with conifers, which provide habitat for rabbits. Even a few rabbits can persistently gnaw on bark and cut leading shoots, preventing most hardwoods from producing quality stems.

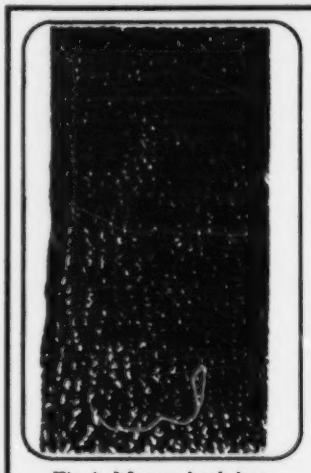

Fig.1 Mature bark has irregular intersecting ridges

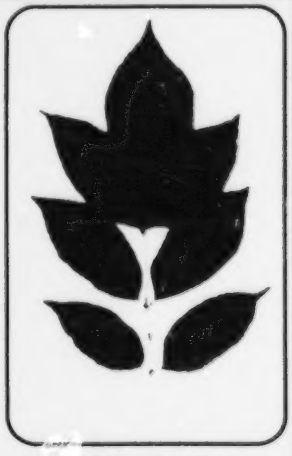

Fig. 2 Leaflets have long stalks

SPACING: There is no ideal spacing for planting all species on all [illegible]. Spacing is therefore a compromise of the space requirement of the crowns, the owner's objectives, and the cost of planting and tending. Trees grown at wide spacings generally grow faster in diameter, with heavier branching, than trees at closer spacing, which have better form. But spacing has little effect on height growth.

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A spacing of 3 m (10 ft) between rows and 1.5 m (5 ft) within rows is recommended. This permits 2,200 trees/ha (870/ac) and allows access by a medium-sized tractor between rows for mechanical or chemical weed control. It promotes early canopy closure to shade out competing vegetation, and allows for some losses or culls.

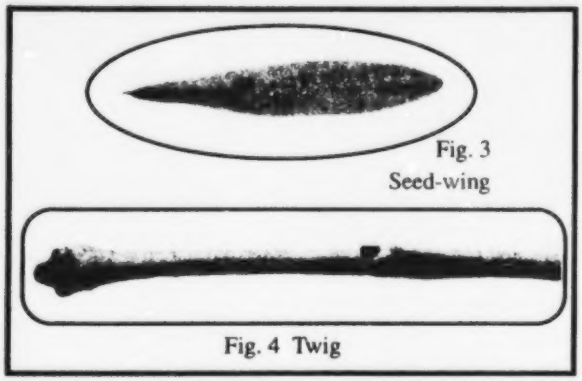

Fig. 3
Seed-wing

Fig. 4 Twig

PLANTING STOCK: Two-year-old transplants, preferably potted, or greenhouse +1 year container stock. Fall sowing of seeds in the nursery, heavily mulched, is simpler than cold moist stratification.Containers may be seeded and cold-stored under plastic until March germination.

TIME OF PLANTING: In spring, as early as site conditions permit, and before flushing begins. After flushing, potted and container stock can be held until mid-June or mid-August. Avoid July and be prepared to water out-planted stock.

PLANTING METHOD: Pit (hole) planting with a spade.

WEED CONTROL AFTER PLANTING: Shortly after planting, spray 5.6 kg/ha (5 lb/ac) of Princep Nine-T (Simazine) over the area, strips or spots prepared for planting. In October of the first and second year, or April of the second and third year, spray 6.7 kg/ha (6 lb/ac) of Princep Nine-T. Where necessary continue spraying after the third year until the trees have outgrown the weed competition. Mechanical weed control by disking and mowing between the rows may be beneficial where chemical control is unacceptable, but is usually ineffective, often damaging tree root systems and encouraging sod formation.

RODENT CONTROL: Mice and rabbit problems may be controlled using poison grain bait stations and plastic tree shelter tubes around individual trees.

PRUNING: During the first three years, prune forked leaders and strong lateral branches to improve tree form. Thereafter, remove all the lowest branches every three to five years in September. Always leave a crown at least half the height of the tree.

J.C. Lees,
April 9, 1990

Adapted with appreciation from "A guide to hardwood planting on abandoned farmland in southern Ontario" by F.W. von Althen, Forestry Canada - Ontario Region.

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